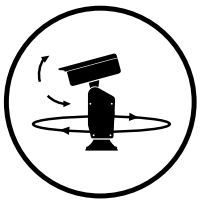
Spark VIEW

A Typical substation consists of several electrical equipments such as CT (Current Transformer), PT (Power Transformer), CB (Circuit Breakers), Surge or Lightning etc. These equipments generate hot-spot due to high voltage or current.

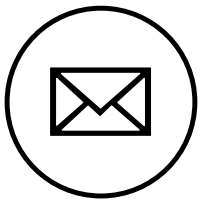
This can lead to breakdown of entire substation. By using a thermal camera we can get early alters of hot-spot area and can prevent from blackout or power cutoff condition . SparkView system is a beneficial system for 24/7 monitoring of a substation. .

KEY FEATURES

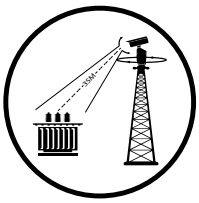
- Early detection of faults ensuring preventive maintenance.
- Reduces human activity in the critical areas.
- 24/7 Inspection leading towards reliable operation.
- Email & SMS alerts on hot-spot detection.
- 360° view for maximum coverage.
- A “Make In India” product.
- Dashboard and analytics features for future evaluation.



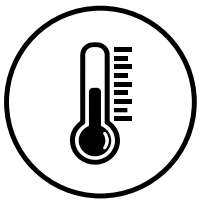
360° Pan & 125° Tilt



Email & SMS alert



Minimum spot size 12.25mm @ 18 mtrs.



-20°C to 120°C | 100°C to 1000°C

Characteristics

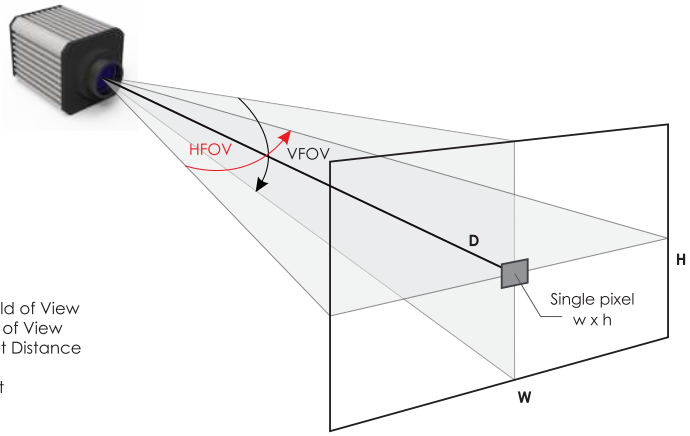
Visual Camera	
Resolution	2 Mega Pixel (D&N)
Detector	1/ 2.8 type Exmor CMOS sensor
Zoom	20x optical zoom
Thermal Camera	
Resolution	384x288
Temperature	-20°C to 120°C | 100°C to 1000°C
Detector	Un-cooled FPA detector
Pitch	17μm
Spectral Range	8 to 14μm
Frequency	30 Hz
NETD/ Sensitivity	<60mK@f/1.0, 30Hz 300 K
Accuracy	±2°C or ±2% of reading in C° or K°
Emissivity (ε)	0.01-1.0 adjustable

Output/ Interface	
Camera Output	Ethernet
For PT System	RS485
Protocol	PELCO-D
Pan &Tilt	
Rotation Range	PAN 360° continuously, Tilt 125°(-85°~ +40°)
Manual Speed	PAN 0.2°~80°/s, Tilt 40°/s
Preset Speed	PAN 80°/s, Tilt 0.2°~40°/s
Dimensions	
Size	330x197x436 mm
Maximum Rotation Radius	245mm
Weight	~5 kg
Environment	
Operating Temperature	0°C to 50°C
Encapsulation	IP66

Applications

Area coverage using different lenses

Using different lenses gives different field of views and minimum spot sizes (i.e. minimum size which the camera can see). So it is essential to choose the appropriate lens according to site the specific requirements.



HFOV = Horizontal Field of View
VFOV = Vertical Field of View
D = Measurement Distance
W = Image Width
H = Image Height

Measurement Field (HFOV×VFOV)	Distance	W×H (Mtrs.)	Min object size D (mm)
28.19°x21.33° (13 mm)	10M	5.02 x 3.76	13.08
	15M	7.53 x 5.65	19.62
	20M	10.04 x 7.53	26.16
	25M	12.55 x 9.41	32.69
	30M	15.06 x 11.29	39.23
14.8°x11.2° (25 mm)	10M	2.61 x 1.96	6.81
	15M	3.91 x 2.94	10.21
	20M	5.22 x 3.92	13.61
	25M	6.52 x 4.90	17.01
	30M	7.83 x 5.88	20.42

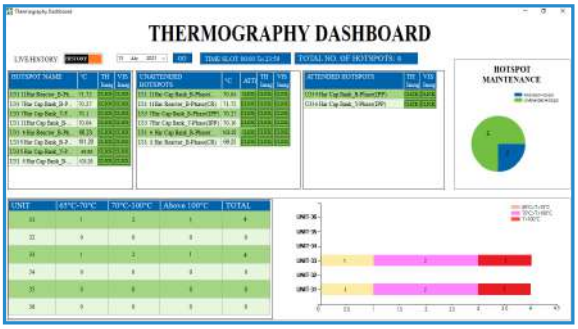
SparkView Software

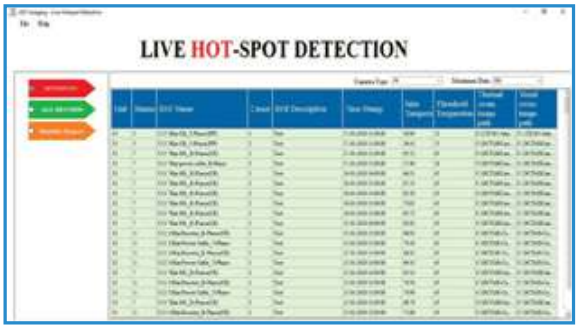
SPARK VIEW
Server - Client

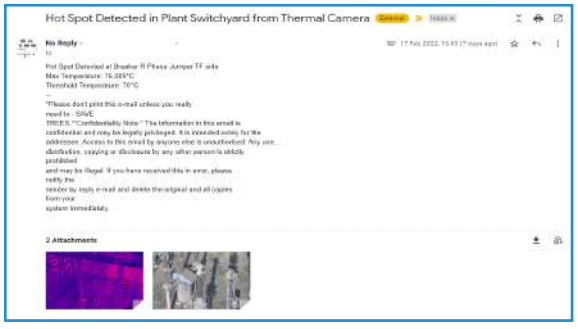
SPARK VIEW
Thermal Report

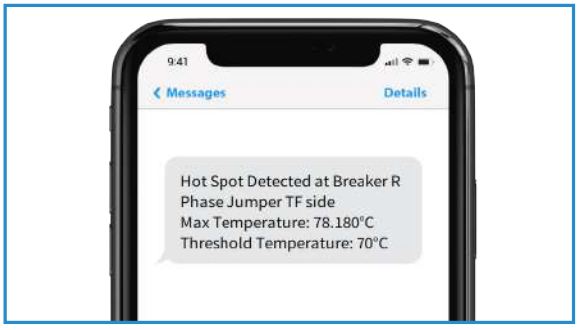
- Simultaneous acquisition from thermal and visual camera, processing, analysis, reporting, and data archiving from system.
- 255 tour stops with up to 32 ROIs (Region Of Interest) per stop.
- ROI Computation.
- Hourly basis scanning and saves images to user defined folders.
- Software based alarms.
- Two step password controlled user access.
- Pan-tilt controls for both automatic and manual positioning.

- ROI temperature data stored in the database software
- Continuous archive temperature data.
- Reporting tools for trends.
- Excel export option.
- Display based on alarms, automated reports.
- Summary Dashboard view.
- Logical structure for asset configuration.
- Hotspot/All Set-points/ Monthly Report.
- Real-time email and SMS notification when temperature exceeds the critical value.

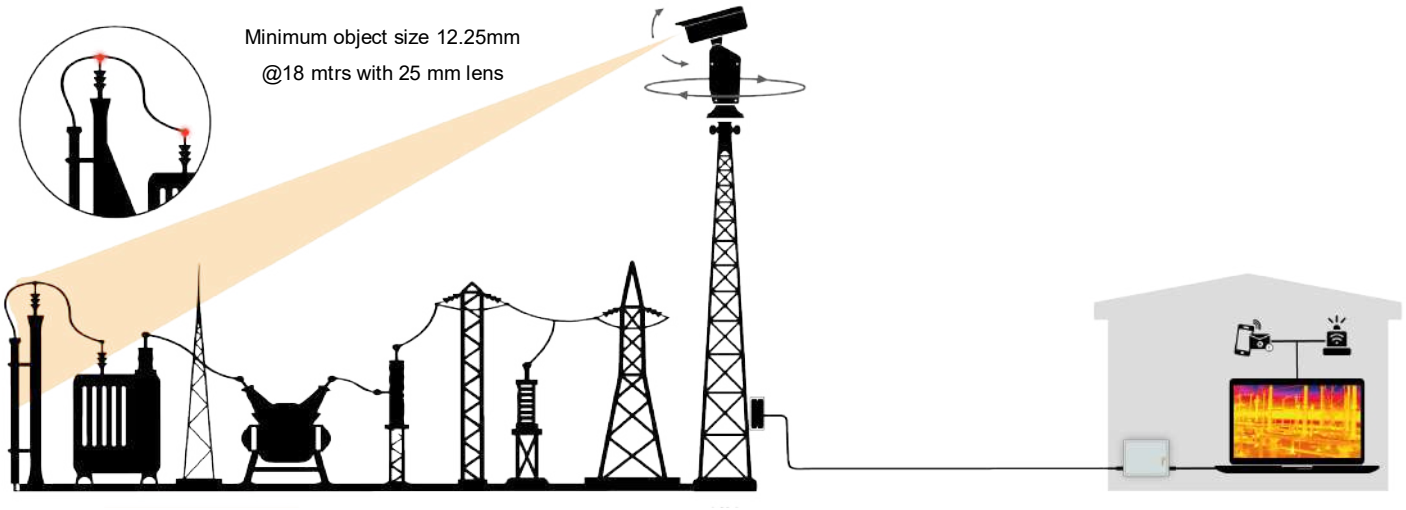




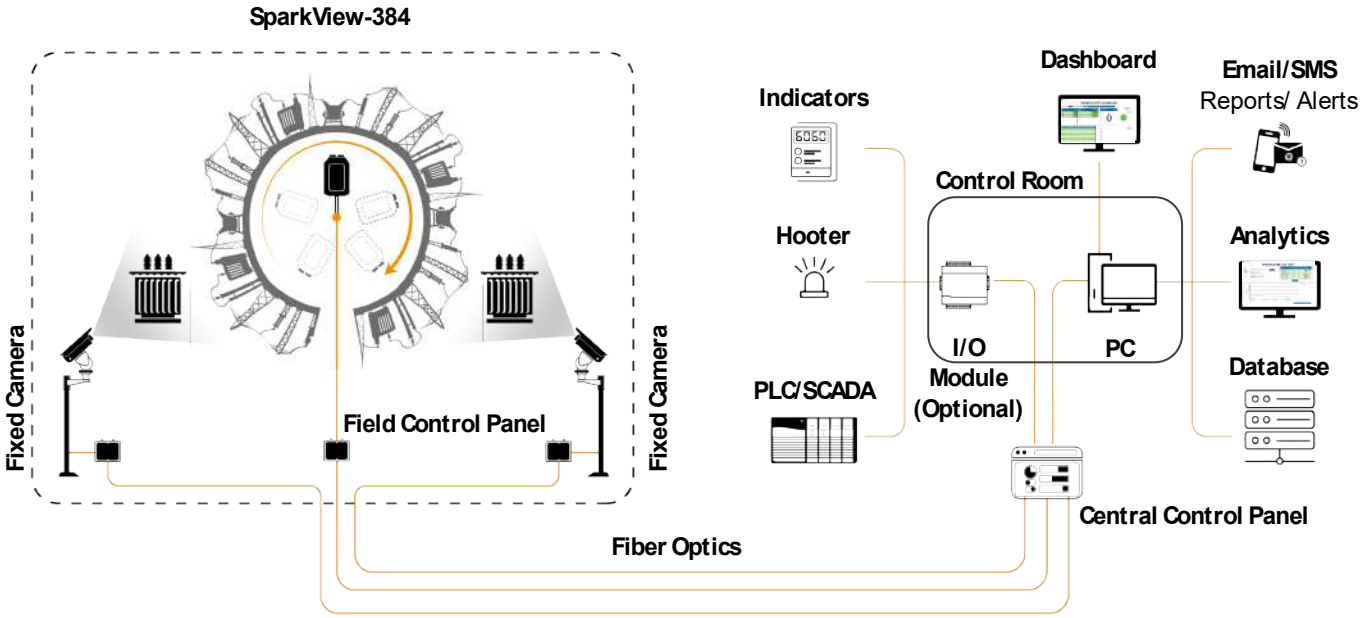




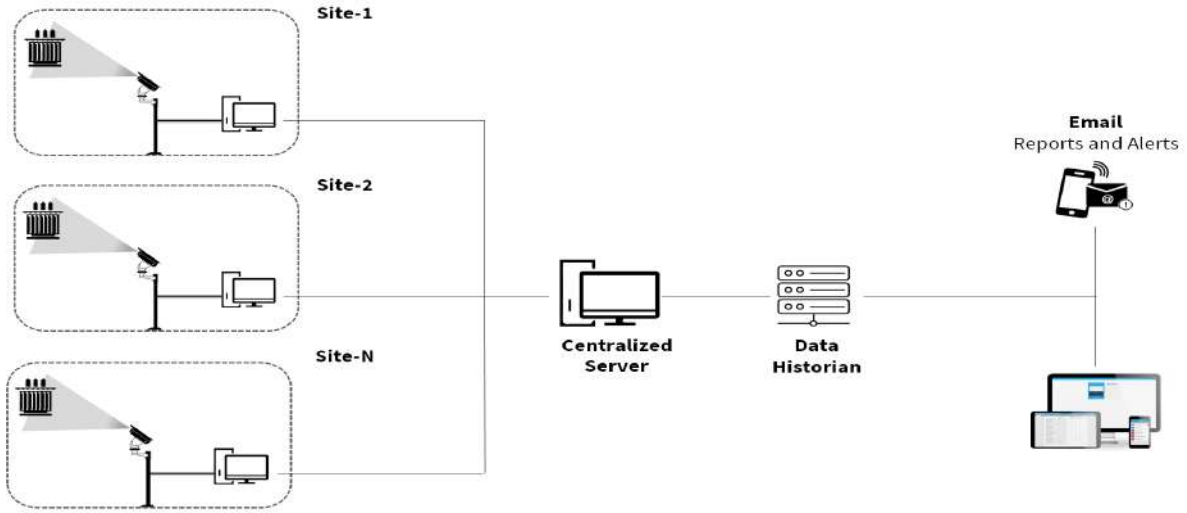
Designed for easy Installation



Automated and Remote Monitoring System



Centralized Server for Multiple Site Locations



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